



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Tasuku Honjo et al.  
 Serial No. : 09/966,880  
 Filed : September 28, 2001  
 Title : NOVEL CYTIDINE DEAMINASE

Art Unit : 1652  
 Examiner : Sheridan L. Swope

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Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 22313-1450

RESPONSE TO RESTRICTION REQUIREMENT

In response to the Restriction Requirement dated April 2, 2003, applicants elect the invention of Group II, drawn to the embodiment of claims 1-5 and 9-18 (in part) and 34-38. In addition, applicants elect the species of SEQ ID NO:9. Claims 1-5, 9-18, and 34-38 read on the elected species. The election of Group II is made with traverse.

The Examiner has divided the claims into 10 separate restriction groups. Applicants respectfully traverse the 10-way restriction, for the reasons provided below.

Applicants have isolated nucleic acids encoding a novel cytidine deaminase protein, termed Activation-Induced cytidine Deaminase (AID). As detailed in the specification, the human and mouse AID amino acid sequences share extremely high overall homology (page 70, lines 16-20; and Figure 22). In addition, all amino acid residues contained in the cytidine and deoxycytidilate deaminase zinc-binding region are conserved between the human and mouse AID polypeptides.

The subject matter of Group II includes the following: nucleic acids encoding human AID; vectors; host cells; nucleic acid fragments; and oligonucleotide primers. The subject matter of Group X is limited to the following: pairs of oligonucleotide primers. The primer pairs recited in claim 39 (Group X) consist of pairs of the specific, individual primers recited in

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I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date of Deposit

*June 2, 2003*

Signature

*Carol Tyrrell*

Typed or Printed Name of Person Signing Certificate

*Carol Tyrrell*

claim 38 (Group II). Because the same primers are included in both claim 38 and claim 39, the issues raised during the course of prosecution of Groups II and X are expected to be similar and examination of claims to individual primers (Group II) together with a claim to primer pairs (Group X) would therefore not be unduly burdensome. Accordingly, applicants request that the Examiner carry out a simultaneous examination of Group II and Group X. If the Examiner agrees to examine Group X together with elected Group II, applicants additionally make the following species election as required on page 7 of the action: the primer pair of SEQ ID Nos 31 and 32. Claim 39 reads on this species.

In light of the extremely high relatedness between the human and murine AID sequences, applicants respectfully submit that the subject matter of Group I should be examined together with that of elected Group II. The Examiner has divided the claims on the basis of their being directed to nucleic acids encoding human (Group II) or murine (Group I) cytidine deaminase polypeptides. Because of the high relatedness between the AID sequences, the issues raised during the course of prosecution of the human and murine sequences are expected to be similar and examination of both sequences would therefore not be unduly burdensome. Accordingly, prosecution will be facilitated by the simultaneous examination of nucleic acids encoding human and mouse AID polypeptides.

In addition to Groups I and II (nucleic acids), each of Groups III and IV (proteins), Groups V and VI (antibodies), and Groups VII and VIII (methods of identification) have also been divided into separate groups based upon the recitation of a human or murine AID sequence. For the same reasons presented herein for Groups I and II, the simultaneous examination of Groups III and IV, Groups V and VI, and Groups VII and VIII would not be unduly burdensome. Accordingly, applicants request that the Examiner withdraw the requirement for restriction between these several groups.

In summary, applicants submit that a five-way restriction, as follows, is appropriate for the pending claims: (1) Groups I, II, and X; (2) Groups III and IV; (3) Groups V and VI; (4) Groups VII and VIII; and (5) Group IX.

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Enclosed is a Petition for a One Month Extension of Time and a Check for the extension of time fee. Please apply any other charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 14882-088001.

Respectfully submitted,

Date: June 2, 2003

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